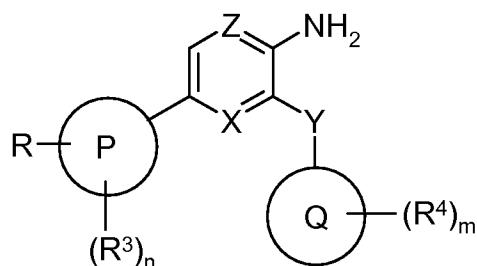


Amendments to the Claims:

This listing of claims will replace all previous version, and listings, of claims in this application.

Listing of Claims:

1. (Currently amended) A compound having the formula I



wherein:

Z is N;

Y is CONR⁵, NR⁵CO, SO₂NR⁵, NR⁵SO₂, CH₂NR⁵, NR⁵CH₂, NR⁵CONR⁵, C₁₋₆alkylene, CH₂CO, COCH₂, CH=CH, OCH₂ or CH₂O;

X is [[CH]] or N;

P is ~~phenyl or a 5 or 6 membered heteroaromatic ring containing one or more heteroatoms independently selected from N, O or S and said phenyl ring or heteroaromatic ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing one or more atoms selected from C, N, O or S;~~

Q is ~~phenyl or a 5 or a 6 membered heteroaromatic ring containing only one or more nitrogen atoms and said phenyl ring or heteroaromatic ring ring may optionally be fused with a 5 or 6 membered saturated, partially saturated or unsaturated ring containing one or more atoms selected from C, N, O or S;~~

R is C₁₋₆alkylNR¹⁰R¹¹ or C₁₋₆alkylazetidine which azetidine ring may be optionally substituted by A;

R³ and R⁴ are independently selected from halo, nitro, CHO, C₀₋₆alkylCN, OC₁₋₆alkylCN, C₀₋₆alkylOR⁶, OC₁₋₆alkylOR⁶, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, C₀₋₆alkylNR⁶R⁷, OC₁₋₆alkylNR⁶R⁷,

$\text{OC}_{1-6}\text{alkylOC}_{1-6}\text{alkylNR}^6\text{R}^7$, NR^6OR^7 , $\text{C}_{0-6}\text{alkylCO}_2\text{R}^6$, $\text{OC}_{1-6}\text{alkylCO}_2\text{R}^6$, $\text{C}_{0-6}\text{alkylCONR}^6\text{R}^7$, $\text{OC}_{1-6}\text{alkylCONR}^6\text{R}^7$, $\text{OC}_{1-6}\text{alkylNR}^6(\text{CO})\text{R}^7$, $\text{C}_{0-6}\text{alkylNR}^6(\text{CO})\text{R}^7$, $\text{O}(\text{CO})\text{NR}^6\text{R}^7$, $\text{NR}^6(\text{CO})\text{OR}^7$, $\text{NR}^6(\text{CO})\text{NR}^6\text{R}^7$, $\text{O}(\text{CO})\text{OR}^6$, $\text{O}(\text{CO})\text{R}^6$, $\text{C}_{0-6}\text{alkylCOR}^6$, $\text{OC}_{1-6}\text{alkylCOR}^6$, $\text{NR}^6(\text{CO})(\text{CO})\text{R}^6$, $\text{NR}^6(\text{CO})(\text{CO})\text{NR}^6\text{R}^7$, SR^6 , $\text{C}_{0-6}\text{alkyl}(\text{SO}_2)\text{NR}^6\text{R}^7$, $\text{OC}_{1-6}\text{alkylNR}^6(\text{SO}_2)\text{R}^7$, $\text{OC}_{0-6}\text{alkyl}(\text{SO}_2)\text{NR}^6\text{R}^7$, $\text{C}_{0-6}\text{alkyl}(\text{SO})\text{NR}^6\text{R}^7$, $\text{OC}_{1-6}\text{alkyl}(\text{SO})\text{NR}^6\text{R}^7$, SO_3R^6 , $\text{C}_{0-6}\text{alkylNR}^6(\text{SO}_2)\text{NR}^6\text{R}^7$, $\text{C}_{0-6}\text{alkylNR}^6(\text{SO})\text{R}^7$, $\text{OC}_{1-6}\text{alkylNR}^6(\text{SO})\text{R}^7$, $\text{OC}_{0-6}\text{alkylSO}_2\text{R}^6$, $\text{C}_{0-6}\text{alkylSO}_2\text{R}^6$, $\text{C}_{0-6}\text{alkylSOR}^6$, $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$ and $\text{C}_{0-6}\text{alkylheteroaryl}$, wherein any $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$ and $\text{C}_{0-6}\text{alkylheteroaryl}$ may be optionally substituted by one or more A;

m is 0, 1, 2, 3 or 4;

n is 0, 1, 2, 3 or 4;

R^5 is hydrogen, $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$, $\text{C}_{0-6}\text{alkylheteroaryl}$, $\text{C}_{1-6}\text{alkylNR}^6\text{R}^7$ or $\text{C}_{1-6}\text{alkylCONR}^6\text{R}^7$;

R^6 and R^7 are independently selected from hydrogen, $\text{C}_{1-6}\text{alkyl}$, $(\text{CO})\text{OR}^8$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$, $\text{C}_{0-6}\text{alkylheteroaryl}$ and $\text{C}_{1-6}\text{alkylNR}^8\text{R}^9$;
 R^6 and R^7 may together form a substituted 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

R^8 and R^9 are independently selected from hydrogen, $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$ and $\text{C}_{0-6}\text{alkylheteroaryl}$;

R^8 and R^9 may together form a 5 or 6 membered heterocyclic ring containing one or more heteroatoms independently selected from N, O or S, which heterocyclic ring may be optionally substituted by A;

R^{10} is hydrogen, $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, $\text{C}_{0-6}\text{alkylaryl}$, $\text{C}_{0-6}\text{alkylheteroaryl}$ or $\text{C}_{1-6}\text{alkylNR}^8\text{R}^9$;

R^{11} is $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$;

A is halo, nitro, CHO, CN, OR^6 , $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{2-6}\text{alkenyl}$, $\text{C}_{2-6}\text{alkynyl}$, $\text{C}_{0-6}\text{alkylC}_{3-6}\text{cycloalkyl}$, fluoromethyl, difluoromethyl, trifluoromethyl, fluoromethoxy, difluoromethoxy, trifluoromethoxy, $\text{C}_{0-6}\text{alkylNR}^6\text{R}^7$, $\text{OC}_{1-6}\text{alkylNR}^6\text{R}^7$, CO_2R^8 , CONR^6R^7 , $\text{NR}^6(\text{CO})\text{R}^6$, $\text{O}(\text{CO})\text{R}^6$, COR^6 , SR^6 , $(\text{SO}_2)\text{NR}^6\text{R}^7$, $(\text{SO})\text{NR}^6\text{R}^7$, SO_3R^6 , SO_2R^6 or SOR^6 ;

as a free base or a pharmaceutically acceptable salt, solvate or solvate of salt thereof.

2. (Original) A compound according to claim 1, wherein Z is N; Y is CONR⁵; X is N; P is phenyl; Q is a 6 membered aromatic heterocyclic ring containing one nitrogen atom; R is C₁₋₆alkylNR¹⁰R¹¹; m is 0; n is 0; R⁵ is hydrogen; R¹⁰ is hydrogen or C₀₋₆alkylC₃₋₆cycloalkyl; C₀₋₆alkylaryl, C₀₋₆alkylheteroaryl or C₁₋₆alkylNR⁸R⁹; and R¹¹ is C₀₋₆alkylC₃₋₆cycloalkyl.

3. (Currently amended) A compound according to claim 2, wherein C₁₋₆alkyl in C₁₋₆alkylNR¹⁰R¹¹ represents propyl; R¹⁰ and R¹¹ represents cyclobutyl; and Q represents pyridine.

4. (Original) A compound which is:

3-Amino-6-{4-[3-(dicyclobutylamino)propyl]phenyl}-N-pyridin-3-ylpyrazine-2-carboxamide hydrochloride;

as a free base or an alternative pharmaceutically acceptable salt, solvate or solvate of salt thereof

5. (Original) A compound which is:

3-Amino-6-bromo-N-pyridin-3-ylpyrazine-2-carboxamide;

as a free base, a salt, solvate or solvate of a salt thereof.

6. (Original) A compound which is:

N-[3-(4-Bromophenyl)propyl]-N,N-dicyclobutylamine;

as a free base, a salt, solvate or solvate of a salt thereof.

7. (Original) A pharmaceutical formulation comprising as active ingredient a therapeutically effective amount of a compound according to any one of claims 1 to 4 in association with pharmaceutically acceptable carriers or diluents.

Claims 8 to 14. (Cancelled).

15. (Currently amended) A method of prevention and/or treatment of conditions associated with glycogen synthase kinase-3, comprising ~~administering~~ administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 to 4.

16. (Currently amended) A method of prevention and/or treatment of dementia, Alzheimer's Disease, Parkinson's Disease, Frontotemporal dementia Parkinson's Type, Parkinson dementia complex of Guam, HIV dementia, diseases with associated neurofibrillar tangle pathologies and dementia pugilistica, comprising ~~administering~~ administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula I as defined in any one of claims 1 to 4.

17. (Original) The method according to claim 16, wherein the disease is Alzheimer's Disease.

18. (Currently amended) A method of prevention and/or treatment of amyotrophic lateral sclerosis, corticobasal degeneration, Down syndrome, Huntington's Disease, ~~postencephalitic~~ postencephalitic parkinsonism, progressive supranuclear palsy, Pick's Disease, Niemann-Pick's Disease, stroke, head trauma and other chronic neurodegenerative diseases, Bipolar Disease, affective disorders, depression, schizophrenia, cognitive disorders, hair loss and contraceptive medication, comprising ~~administering~~ administering to a mammal, including man in need of

such prevention and/or treatment, a therapeutically effective amount of a compound of formula **I** as defined in any one of claims 1 to 4.

19. (Currently amended) A method of prevention and/or treatment of predemented states, Mild Cognitive Impairment, Age-Associated Memory Impairment, Age-Related Cognitive Decline, Cognitive Impairment No Dementia, mild cognitive decline, mild neurocognitive decline, Late-Life Forgetfulness, memory impairment and cognitive impairment, vascular dementia, dementia with Lewy bodies, Frontotemporal dementia and androgenetic alopecia and Type I and Type II diabetes, diabetic neuropathy and diabetes related disorders, comprising ~~administering~~ administering to a mammal, including man in need of such prevention and/or treatment, a therapeutically effective amount of a compound of formula **I** as defined in any one of claims 1 to 4.

20. (Cancelled).